

This group extends over a considerable district. On the east, a small outlier of the lower beds appears at Castle Hill, near Newhaven, in Sussex;\* but to the westward of Brighton, beyond Worthing, the London clay rises to the surface, and forms the sub-soil between the Downs and the sea-shore. The inland boundary stretches by Chichester, Emsworth, and Southampton, to Dorchester; and the clay is spread over the whole area of the New Forest and the Trough of Poole, being flanked by the chalk on the north, north-east, and north-west, and open to the sea on the south. The Isle of Wight, although now separated from the main land, is a disrupted mass of the formations of the south-east of England; the chalk basin having been broken up, and the chalk and the superimposed sands, clays, and gravel, in some instances, thrown into a vertical position. A remarkable and well-known instance of this phenomenon occurs at Alum Bay, so called from the alum, formerly extracted from the decomposing pyrites, with which the clay abounds.

24. ALUM BAY.—This sketch (Tab. 36) conveys a general outline of the bay; *a*, represents the vertical chalk; *b, b*, the corresponding tertiary strata, consisting of sands and clays of an infinite variety of colour, and containing abundance of shells. Advantage is taken of the diversified tints of the sands to represent, in glass vessels, landscapes of the island,

\* Geology of the South-East of England, p. 53.